AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA", and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Holyoke Water Power Company
Mount Tom Station

is authorized to discharge from the facility located at

Route 5, Smith's Ferry
Holyoke, Massachusetts 01040

to receiving waters named the Connecticut River

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the date of issuance.

This permit and the authorization to discharge expire at midnight, five years from date of issuance.

This permit supersedes the permit issued on August 17, 1987.

This permit consists of pages in Part I including effluent limitations, monitoring requirements, etc., and 22 pages in Part II including General Conditions and Definitions.

Signed this 18th day of Sept 1992

Director
Water Management Division
Environmental Protection Agency
Boston, MA

Director, Division of Water
Pollution Control
Department of Environmental
Protection

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number: 001, once through cooling water.

a. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic		Discharge Limitations Avg. Monthly	Max. Daily	Monitoring Requirements Measurement Frequency	Sample Type
Flow-MGD	(Two pumps operation)	133.2	133.2	Daily	Total Daily
	(One pump operation)	70	70		
* Total Residual Oxidants-mg/l		0.15	0.15	Weekly(when in use)	Grab
Temperature (as T_{MAX})-°C(°F)		-	39(102)	Hourly	Grab
** Temperature Rise (as delta T)-°C(°F)	(Two pumps operation)		11.1(20)	Hourly	Grab
	(One pump operation)		17.7(32)		

* EPA limits total residual oxidants when both chlorine and bromine are used for biofouling control. The accepted EPA test procedure in 40 CFR Part 136 for total residual chlorine (TRC) may be used to analyze for this parameter. The TRC test measures [HOCl]. [OCl^-], [$HOBr^-$] and [OBr^-]. Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

** Defined as the difference between the intake and the discharge.

b. The pH shall not vary more than 0.5 standard units from that of the natural river. A grab sample of the Connecticut River and the discharge shall be monitored twice a month, report minimum and maximum values.

c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

d. The permittee shall not augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with the above limitations.

e. Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharging.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number: 002, wastewater treatment plant effluent.

a. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow-MGD	0.216	0.360	Continous	Total Daily
TSS-mg/l	30	100	2/Month	Grab
Oil & Grease-mg/l	15	15	2/Month	Grab
Copper (total)-mg/l	1.0	1.0	2/Month	Grab
Iron (total)-mg/l	1.0	1.0	2/Month	Grab
Nickel (total)-mg/l	1.0	2.0	2/Month	Grab
Zinc (total)-mg/l	1.0	2.0	2/Month	Grab

b. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice a month by a grab sample, report minimum and maximum values.

c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

d. The permittee shall not augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with the above limitations.

e. Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharging.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial numbers: 003, 004, 007 and 009a, storm water runoff.

a. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow-m^3/Day (MGD)	Report only		Daily	Estimate**
TSS - mg/l	30	100	1/Month	Grab*
Oil & Grease - mg/l	15	15	1/Month	Grab*

* A grab sample will be taken once each month in which there is a discharge. The permittee need only sample outfalls 003 and 007. The data obtained from outfall 007 may be submitted for outfalls 004 and 009a. The sample from outfall 003 shall be taken when discharge pipe is accessible and not submerged in the Connecticut River. A negative report (a report of no discharge) will be submitted for those months in which there is no discharge.

** An estimate of the total daily flow from each outfall resulting from storm events shall be reported on the monthly discharge monitoring reports.

b. The pH shall not be less than 6.5 standard units nor greater than 8.3 standard units unless due to natural causes and shall be monitored at 003 and 007 once a month when there is a discharge by a grab sample.

c. The effluent shall not contain a visible oil sheen, foam or floating solids at any time.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the outfall for 003 and at a point prior to combining with the storm water runoff from the highway for 007.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial numbers: 005, screen wash and service water tank overflow and 006, reflecting pool overflow. may be gone.

a. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic		Discharge Limitations Avg. Monthly	Max. Daily	Monitoring Requirements Measurement Frequency	Sample Type
Flow-m^3/Day (MGD)	Outfall 005	-	0.71(normal)	-	Estimate*
		-	1.074(with intermittant fire pump uses)[1]		Estimate*
	Outfall 006	-	0.144	-	Estimate*

* In the event of a discharge, an estimate of the total daily flow for the day from each outfall shall be reported on the monthly discharge monitoring reports.

b. The pH shall not be less than 6.5 standard units nor greater than 8.3 standard units unless due to natural causes and shall be monitored at 005 and 006 once a month when there is a discharge by a grab sample.

c. The effluent shall not contain a visible oil sheen, foam or floating solids at any time.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at at a representative point prior to discharging.

Footnote:

1. Fire pump may be used intermittantly for deicing purpose.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial numbers: 008 and 009, bottom ash transport water.

a. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow (MGD)	0.25[1]	0.30	Daily	Total Daily
TSS - mg/l	30	100	2/month	Grab
Oil & Grease - mg/l	15	15	2/Month	Grab
Copper(total)-mg/l	1.0	1.0	2/Month	Grab
Iron(total)-mg/l	1.0	1.0	2/Month	Grab
Nickel(total)-mg/l	1.0	2.0	2/Month	Grab
Zinc(total)-mg/l	1.0	2.0	2/Month	Grab

b. The pH shall not be less than 6.5 standard units nor greater than 8.3 standard units and shall be monitored twice a month by a grab sample, report minimum and maximum values.

c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

d. The permittee shall not augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with the above limitations.

e. Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharging.

Footnote:

1. Outfall 008 and Outfall 009 do not discharge simultaneously, nor will both be used in any given day.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

6. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial numbers: 010 and 011, fly ash transport water.

a. Such discharges shall be limited and monitored by the permittee as specified below: might change

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow (MGD)	1.0[1]	1.2	Daily	Total Daily
TSS - mg/l	30	100	2/month	Grab
Oil & Grease - mg/l	15	15	2/Month	Grab
Copper(total)-mg/l	1.0	1.0	2/Month	Grab
Iron(total)-mg/l	1.0	1.0	2/Month	Grab
Nickel(total)-mg/l	1.0	2.0	2/Month	Grab
Zinc(total)-mg/l	1.0	2.0	2/Month	Grab

b. The pH shall not be less than 6.5 standard units nor greater than 8.3 standard units and shall be monitored twice a month by a grab sample, report minimum and maximum values.

c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

d. The permittee shall not augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with the above limitations.

e. Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharging.

Footnote:

1. Outfall 010 and Outfall 011 do not discharge simultaneously, nor will both be used in any given day.

A. EFFLUENT LIMITATION AND MONITORING REQUIREMENTS

7. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

8. The discharge shall not jeopardize any class B use of the receiving stream and shall not violate applicable water quality standards for Class B water as defined by the State of Massachusetts.

9. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the uses designated by the classification of the receiving waters.

10. The thermal plumes from the station shall: (a) not block zones of fish passage, (b) not interfer with spawning of indigenous populations, (c) not change the balanced indigenous population of the receiving water, and (d) have minimal contact with surrounding shorelines.

11. The effluent shall not contain materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving waters.

12. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe (40 CFR §122.42):

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant (as defined in 40 CFR §122.2) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      (1) One hundred micrograms per liter (100 ug/l);

      (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

      (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

      (4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f).

b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) Five hundred micrograms per liter (500 ug/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f).

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

13. It has been determined that the circulating water intake structure presently designed employs the best technology available for minimizing adverse environmental impact. No change in the location, design or capacity of the present structure can be made without prior approval of the Regional Administrator and the Direct. The present design shall be reviewed for conformity to regulations pursuant to Section 316(b) when such are promulgated.

14. Biological Monitoring

No biological monitoring is required. Future monitoring may be required, however, upon permit modification or reissuance. Any incidence of fish mortality of unusual numbers (i.e. twice the average number) of fish impinged on the intake shall be reported to the Regional Administrator and the Director within 24 hours by telephone report as required in Part II(1)(5) of this permit. A written confirmation report is to be provided within five(5) days. This reports should include the following:

a. The kinds, sizes, and approximate number of fish involved in the incident.

b. The time and date of the occurence.

c. The operating mode of the plant.

d. The opinion of the company as to the reason the incident occurred.

e. The remedial action the company will take to prevent a reoccurrence of the incident.

15. Chlorine and Acti-Brom may be used as biocides. No other biocide shall be used without explicit approval from the Regional Administrator and the Director.

B. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Form(s) (DMR's) postmarked no later than the 21st day of the month following the completed reporting period. The first reports must be postmarked by the 21st day of the month following the effective date of the permit.

Duplicate signed copies of all Discharge Monitoring Reports and all other reports required herein shall be submitted to the Director at the following address:

U. S. Environmental Protection Agency
NPDES Program Operation Section
P.O. Box 8127
Boston, Massachusetts 02114

Duplicate signed copies of all the Discharge Monitoring Reports and all other report herein, shall be submitted to the State at the following address:

Massachusetts Department of Environmental Protection
Massachusetts Division of Water Pollution Control
Western Regional Office
436 Dwight Street
Springfield, Massachusetts 01103

Signed copies of all other notification and reports required by this permit, excluding DMR's Reports, shall be submitted to the State at:

Massachusetts Department of Environmental Protection
Massachusetts Division of Water Pollution Control
Regulatory Branch
1 Winter Street
Boston, Massachusetts 02108

C. STATE PERMIT CONDITIONS

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency and the Division of Water Pollution Control under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Director of the Massachusetts Division of Water Pollution Control pursuant to M.G.L. Chap. 21, §43.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless -- and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U. S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

NPDES PERMIT NO.: MA0005339

STATE PERMIT NO.: 278

NAME AND ADDRESS OF APPLICANT:

R.A. Reckert, Vice President
P.O. Box 270
Hartford, CT 06141

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Holyoke Water Power Company
Mount Tom Station
Route 5, Smith's Ferry
Holyoke, MA 01040

RECEIVING WATER: Connecticut River

CLASSIFICATION: B

I. Proposed Action, Type of Facility, and Discharge Location.

The above named applicant has applied to the US Environmental Protection Agency for reissuance of a NPDES permit to discharge into the designated receiving water. The facility is engaged in the generation of power. The discharge is from various power plant discharge streams: once through noncontact cooling water, treated cleaning wastewaters, treated fly ash and bottom ash transport water, intake screen wash water and stormwater runoff. The facility discharges into the Connecticut River located in Holyoke, MA.

II. Description of Discharge.

A quantitative description of the discharge in terms of significant effluent parameters based on data presented in the application and/or discharge monitoring reports is shown on Attachment A1-A3.

III. Limitations and Conditions.

The effluent limitations of the draft permit, the monitoring requirements may be found in the draft permit.

IV. Permit Basis and Explanation of Effluent Limitation Derivation.

Holyoke Water Power Company (HWPC), located in Holyoke, MA, owned and operated by Northeast Utilities, has applied for reissuance of their NPDES permit to discharge process wastewater from a steam generating power plant. Approximately 154 megawatts of electricity are generated daily using coal as the primary fuel source.

HWPC has eleven outfalls to the Connecticut river labeled as 001-011 on Attachment B. Outfall 001 contains once through noncontact cooling water. Outfall 002 contains wastewater from the facilities treatment system. The system treats wastewater from cleaning operations, floor and roof drains, contaminated stormwater runoff from the coal pile storage area, demineralizing operations, pump seals and furnace drains. The treatment system consists of flotation, flocculation, sedimentation and vacuum filtration. Outfalls 003, 004, 007, and 009a contain stormwater runoff. Outfall 005 is backwash from intake screen cleaning operations and overflow from a service water tank. Water from the Connecticut River is pumped into the service tank and stored for emergency situations. Occasionally when the tank is being filled it overflows; this overflow is returned to the river. Outfall 006 is overflow from a reflecting Pool. The reflecting pool was constructed for aesthetic purposes only. Discharge from this outfall is expected only during heavy rain storms if the pool overflows. Outfalls 008 and 009 contain bottom ash transport wastewater. This wastewater is collected in a basin for treatment by settling. The facility has two basins used alternately for this purpose. Outfall 008 discharges from one basin and 009 from the other. The basins are never used simultaneously. Finally, outfalls 010 and 011 contain fly ash transport water. There are also two basins available to collect and treat this wastewater and they are also used alternately. The locations of these outfalls on the site may be seen on Attachment C.

The Clean Water Act establishes the national objective "to restore and maintain the chemical and biological integrity of the Nation's waters." The Act requires the Administrator of the EPA to establish effluent limitations which set forth the degree of reduction attainable through the application of best practicable control technology currently available (BPT), best conventional pollutant control technology (BCT), and best available technology economically achievable (BAT) (Section

301 and 304) for those industries for which national effluent guidelines have been promulgated. In addition, the effluent limitations must insure compliance with water quality standards as established by state law or regulation.

Final regulations establishing BPT and BAT requirements for the Steam Electric Power Generating Category were promulgated on November 19, 1982 at 47FR52304. In developing the permit, EPA has used the limitations in the national guidelines except where alternate or additional effluent limitations are required because of (1) receiving stream water quality, (2) state effluent limitations or (3) application of section 40 CFR 122.44(1)1, which requires effluent limitations at least as stringent as the previous permit under most circumstances. The derivation of the limits for each outfall is outlined below.

EPA has determined that the discharge as regulated will not cause a violation of the water quality standards of the Connecticut River. Calculations to protect the receiving stream are based on an extreme low flow (7Q10) of 1085 MGD and a more average low flow (30Q2) of 4304 MGD (See Attachments D and E for sample calculations).

Outfall 001

The flow limits on the noncontact cooling water are the same as those in the previous permit. The flow is limited to 133.2 MGD for both the monthly average limit and the daily maximum limit.

Presently, chlorine is the only compound added to this stream to control biofouling. In a previous permit, issued on November 30, 1981, limited the total residual chlorine to 0.1 mg/l for both the daily maximum and the monthly average. This limit was required by the state of Massachusetts DEQE (the forerunner of DEP) and is a value achievable by the technology employed by most facilities in Massachusetts. In the event that a particular facility cannot operate at or below this level of chlorination, the permittee may submit a demonstration showing that a discharge of higher levels would be consistent with the toxicity requirements of the Massachusetts water quality standards. HWPC submitted such a demonstration and the Massachusetts DEQE approved a change in the maximum discharge limit from 0.1 mg/l to 0.15 mg/l on October 29, 1984. This limit is more stringent than the limits required by EPA's national guidelines and thus meets the technology requirements of the CWA and will remain in the proposed draft permit. The chlorine residual limit is now a state certification requirement.

HWPC may use a compound known as Acti-Brom which is used to enhance chlorines potential for controling biofouling. HWPC requests that the proposed permit authorizes the use of this compound. EPA regulates total residual oxidants when both chlorine and bromine are used for biofouling control. The EPA accepted test procedure in 40 CFR Part 136 for total residual chlorine (TRC) may be used for this parameter. The TRC test measures [HOCl], [OCl^-], [HOBr] and [OBr].

The temperature and pH limits are necessary to protect the water quality standards of the receiving stream. For class B warm water fisheries, the standard states that "the temperature shall not exceed 83°F(28.3°C) nor shall the rise resulting from artificial origin exceed 4°F(2.2°C). The present permit limits the daily maximum temperature to 102°F(39°C). The discharge at this maximum temperature will not violate the water quality standards (see Attachment F for example calculations) and will remain in the proposed draft permit. The limits on Delta-T, the difference between the intake and discharge temperatures, are derived from operational data. The warm weather months and cold weather months do have different limits because different pumping capacities were utilized for the cooling water.

Outfall 002

The flow limits on the discharge from the wastewater treatment plant are the same as those found in the previous permit to reflect current conditions at the plant and to incorporate fluctuations which may occur due to maintenance practices. The limits on TSS, copper and iron are based on EPA's national guidelines.

The limits on nickel, zinc, oil & grease and pH are required by the state of Massachusetts to protect the water quality standards and to receive state certification of the permit. All the limits on this outfall are the same as those found in the previous permit and fulfill both the technology and water quality requirements of the CWA.

Outfalls 003, 004, 007 and 009

Outfalls 003, 004, 007 and 009 were authorized in the previous permit. Because of the collection and conveyance system employed by 004 and 007, these outfalls rarely discharged any stormwater during the effective period of the existing permit. The stormwater runoff either percolated into the ground or evaporated.

The stormwater collection basins for outfalls 004, 007 and 009a are located at points far removed from the industrial activities on the site. The effluent from each of these

outfalls should be similar to one another in nature. EPA is therefore only requiring a sample from outfall 007. Data from this sample may be submitted for outfalls 004 and 009a.

The stormwater collection basin for outfall 003 is located next to the coal pile storage area. Because of its proximity, the potential for contamination is greater than the remaining stormwater outfalls. Therefore, the permittee is also required to sample this discharge. The only available point for sampling is at the outfall. However, during periods of high flow, the discharge pipe is submerged in the Connecticut River and is inaccessible. Therefore, EPA is only requiring that samples be taken when the discharge pipe is accessible.

EPA is not regulating the flow of the stormwater runoff from the outfalls listed above. However, the permittee is required to estimate the total daily flow from each outfall resulting from storm events and report it on the monthly discharge reports.

Based on best professional judgement (BPJ), EPA is limiting the concentration of TSS in the outfalls to a monthly average of 30 mg/l and a daily maximum of 100 mg/l. These levels are achievable by facilities utilizing good house keeping practices and will not violate the water quality standards. The limits on oil & grease and pH are required by the state water quality standards and are necessary for state certification of the permit.

Outfall 005 and 006

The flow from intake screen washing operations and the reflecting pool overflow is based on the data presented on the permittee's application. The permittee may use fire pump for deicing purpose. The priority pollutant prohibition was established to verify that the discharge is only authorized as it naturally exists. Any artificial introduction of pollutants will require prior approval from the EPA and the DEP. The pH limit is necessary to protect the state water quality standards.

Outfalls 008, 009, 010 and 011

Discharge from all of these outfalls is very infrequent. Most of the wastewater percolates into the ground. HWPC has a state ground water permit for these discharges. Discharge to the Connecticut River is only expected during excess flow conditions.The flow of the bottom ash and fly ash transport water is limited according to data presented by the facility. Like Outfall 002, the limit on TSS is based on EPA's national guidelines and the remaining limits are required by the state of Massachusetts. All the limits are the same as those found

in the previous permit which satisfy the technology and water quality requirements of the CWA.

The monitoring program in the permit specifies routine sampling and analysis which will provide continuous general information on the reliability and effectiveness of the installed pollution abatement equipment. The effluent monitoring requirements have been established to reflect state certification requirements under Section 401(a)(1) of the CWA, and to yield data representative of the discharge under the authority of section 308(a) of the CWA as required by 40 CFR122.41(j), 122.44 and 122.48.

The remaining general and special conditions of the permit are based on the NPDES regulations, 40 CFR Parts 122 through 125, and consist primarily of management requirements common to all permits.

In 1974, the Holyoke Water Power Company was issued an order by the Massachusetts Water Resources Commission, Division of Water Pollution Control to initiate a biological study at the Mt. Tom steam electric generating station as a condition on the application for a discharge permit. Following discussions between Massachusetts Division of Fisheries and Game and the company, a mutually agreed upon study proposal was developed and approved by the Division of Water Pollution Control. The study was conducted by the Division of Fisheries and Game.

The conclusion of the study is as follow: "The impact of the Holyoke Water Power, Mt. Tom fossil fueled steam electric generating station heated discharge on the Connecticut River cannot be totally assessed due to lack of comparative data prior to the plant becoming operational. Additional pollution sources above the power plant which have degraded water quality over the years must also be considered as factors complicating this study.

This short-term biological evaluation concentrated effort on areas of potential environmental impact on plankton, benthic organism, and fish. The power station's chlorination process did not increase the total residual chlorine levels in heated discharge water to levels above Massachusetts standards. Plankton results were inconclusive and no quantitative effects could be derived. Macroinvertebrates were affected the greatest. Sampling stations located in warmer sections of the heated effluent had lower diversities, which could also reflect effluent velocity effects, while those downstream, under little or no effect from the effluent, exhibited higher diversities. Some resident fish species appeared to favor the heated effluent and are contrated there -- approximately twice as many fish were sampled in the thermal plume as above.

It is concluded that during the summer of 1974 the river flow and plant operating conditions produced only minimal impact on the plankton, benthic organisms, and fish within the area affected by the heated discharge."

In the summer of 1983, the Massachusetts Division of Water Pollution Control conducted a water quality study of a two-and-one-half mile segment of the Connecticut River to evaluate impacts to the water quality and aquatic biota of the river as the result of groundwater contamination and waste disposal activities at the Mt. Tom Generating Station.

It is found that "existing groundwater contamination and present wastewater disposal practices at Mt. Tom facility are not adversely impacting the water quality or the biota of the Connecticut River."

V. State Certification Requirements.

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the Massachusetts Department of Environmental Quality Engineering has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State and expects that the draft permit will be certified.

VI. Comment Period, Hearing Requests, and Procedures for Final Decisions.

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Compliance Branch, JFK Federal Building, Boston, Massachusetts 02203. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after a public

hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of 40 CFR 124.74, 48 Fed. Reg. 14279-14280 (April 1, 1983).

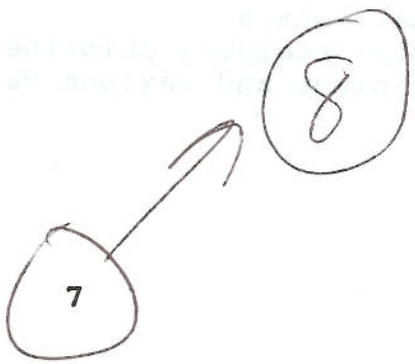
VII. EPA Contact

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

William Eng
Wastewater Management Branch (WMM)
John F. Kennedy Federal Building
Boston, MA 02203
Telephone: (617) 565-3583

February 20, 1992
Date

David A. Fierra, Director
Water Management Division
U.S. Environmental Protection Agency



ATTACHMENT A1

DESCRIPTION OF DISCHARGE: Once through noncontact cooling water

OUTFALL: 001

EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter	Application AV.	Application MAX.	Jan.1988-Sept.1990 Discharge Monitoring Reports AV.	Jan.1988-Sept.1990 Discharge Monitoring Reports MAX.
Flow-MGD	97.1	133.2		133.2 (Two pumps) 69.2 (One pump)
TSS-mg/l	<2.22	<4.0		
Oil & Grease-mg/l	-	<5.6		
Copper(T)-mg/l	-	<0.01		
Iron(T)-mg/l	-	0.24		
Zinc(T)-mg/l	-	0.01		
Chlorine(TR)-mg/l	.08	0.14	0.08	0.15
Temp.(as TMAX)-°C(°F)-		36(96.8)		(101)
Temp. Rise (as delta T)-°C(°F)-				(18) (Two pumps) (31) (one pump)
*pH	6.6	7.9	6.8	7.5

* refer to minimum and maximum values respectively

DESCRIPTION OF DISCHARGE: Wastewater treatment plant effluent

OUTFALL: 002

EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter	Last Permit AV.	Last Permit MAX.	Nov. 1987-Oct. 1990 Discharge Monitoring Reports AV.	Nov. 1987-Oct. 1990 Discharge Monitoring Reports MAX.
Flow-MGD	0.216	0.360	0.040	0.128
TSS-mg/l	30	100	4.75	9.60
Oil & Grease-mg/l	-	15.0	<2.0	2.8
Copper(T)-mg/l	-	1.0	<0.05	0.06
Iron(T)-mg/l	-	1.0	<0.7	0.73
Nickel(T)mg/l	-	1.0	<0.3	<0.5
Zinc(T)-mg/l	-	1.0	<0.5	0.24
*pH	6.5	8.0	6.7	7.9

(T)-indicates total metals
(TR)-indicates total residual chlorine
* -represents minimum and maximum values respectively

ATTACHMENT A2

DESCRIPTION OF DISCHARGE: Stormwater runoff
OUTFALL: 003, 004, 007, 009a
EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter		Application AV.	Application MAX.	Nov 1987- Oct 1990 Discharge Monitoring Reports AV.	Nov 1987- Oct 1990 Discharge Monitoring Reports MAX.
Flow-GPD	003:	10000	-	Outfalls 009a, 004 and 007 had no discharge the entire period.	
	004:	29000	-		
TSS-mg/l		-	6.9		
Oil & Grease-mg/l		-	0.6	0.6	
*pH		6.5	6.5	6.5	
Flow-GPD	007:	-	10,000		
	009a:	-	5,000		

DESCRIPTION OF DISCHARGE: Intake screen cleaning water
OUTFALL: 005
EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter	Application AV.	Application MAX.	Nov 1987-Oct 1990 Discharge Monitoring Reports AV.	Nov 1987-Oct 1990 Discharge Monitoring Reports MAX.
Flow-GPD	71,000	1,074,000	26,385	443,800
TSS-mg/l	<1.0			
Oil & Grease-mg/l	-	1.4		
Copper(T)-mg/l	-	<.06		
Iron(T)-mg/l	-	0.25		
Zinc(T)-mg/l	-	<.06		
*pH	6.6	7.2		

* -represents minimum and maximum values respectively

Attachment A3

DESCRIPTION OF DISCHARGE: Reflecting pool overflow
OUTFALL: 006
EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter	Application AV.	Application MAX.	Nov 1987-Oct 1990 Discharge Monitoring Reports AV.	Nov 1987-Oct 1990 Discharge Monitoring Reports MAX.
Flow-GPD	-	144,000	No monitoring or reporting was required on the previous permit	
TSS-mg/l	3.0	3.6		
			There were no discharge.	
*pH	6.6	7.2		

* -represents minimum and maximum values respectively

DESCRIPTION OF DISCHARGE: bottom ash transport water
OUTFALL: 008 and 009
EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter	Application AV.	Application MAX.	Nov 1987-Oct 1990 Discharge monitoring Reports AV.	Nov 1987-Oct 1990 Discharge monitoring Reports MAX.
Flow-GPD	250,000	-	There was no discharge from either outfall during the entire period.	
TSS-mg/l	4.0	6.0		
Oil & Grease-mg/l	0.02	0.04		

DESCRIPTION OF DISCHARGE: Fly ash transport water

OUTFALL: 010 and 011

EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

parameter	Application AV.	Application MAX.	Nov 1987-Oct 1990 Discharge Monitoring Reports AV.	Nov 1987-Oct 1990 Discharge Monitoring Reports MAX.
Outfall 010				
Flow-GPD	1,008,000		There was no discharge from either outfall during the entire period.	
Flow only in emergency				
Outfall 011				
no flow- not connected at this time				

MT. TOM STATION

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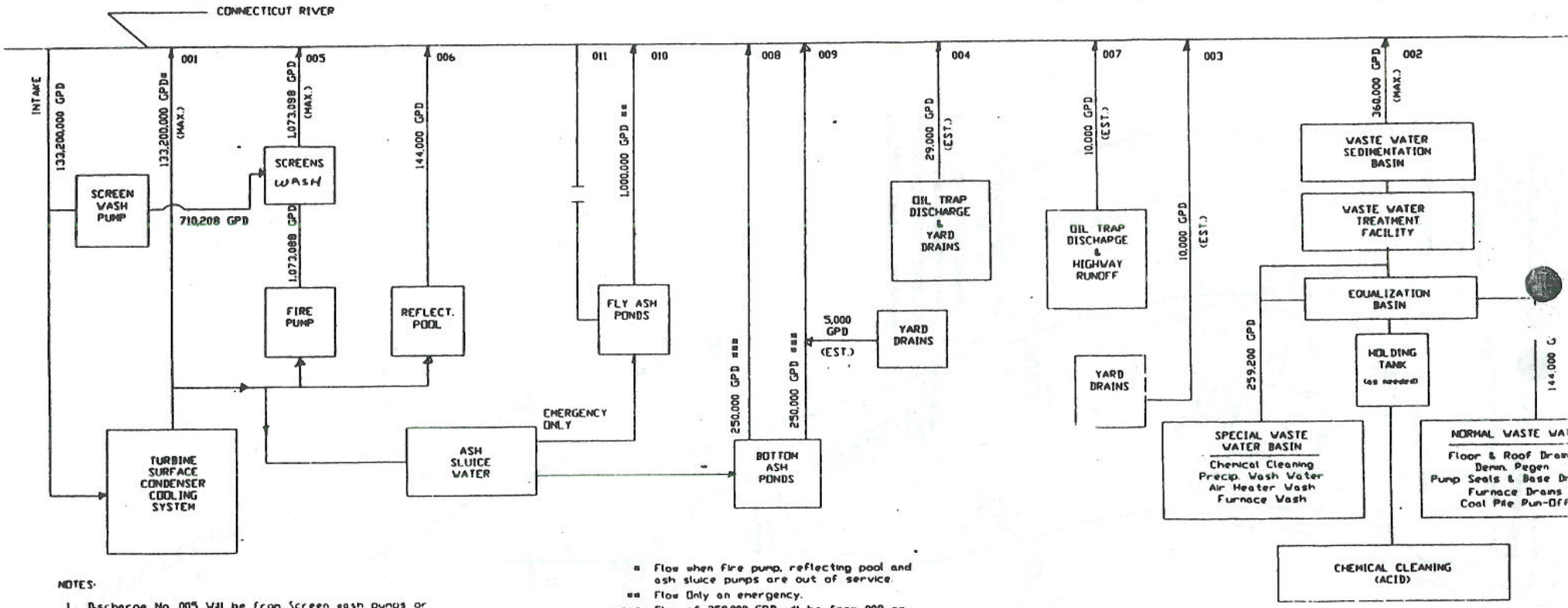
EPA I. D. No. MAD 00846105



NOTES:

1. Discharge No 005 Will be from Screen wash pumps or Fire pump, not both together
2. Discharge No 011 is not connected at this time

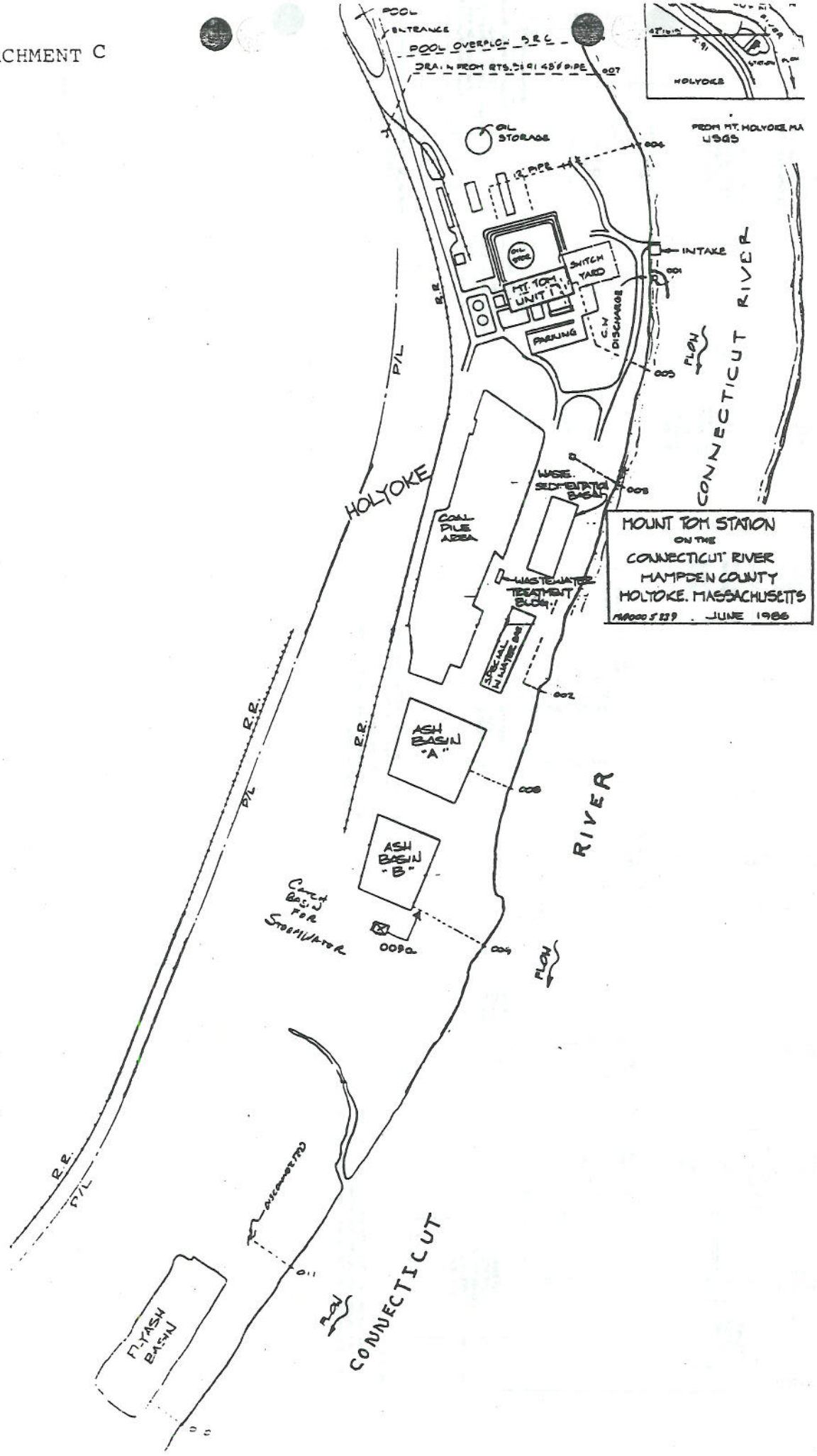
= Flow when fire pump, reflecting pool and ash sluice pumps are out of service.

== Flow Only an energency.

=== Flow of 250,000 GPD will be from 008 or 009, not both together.

DEC 1991

ATTACHMENT C



ATTACHMENT D2

Outfall 002

NOTE: Outfalls 008, 009, 010 and 011 have limits on the same parameters as 002. A table such as the one presented below can easily be established in a similar manner for each outfall. The results would be the same in that the proposed draft permit contains the same limits as the present discharge permit.

Discharge Flow Average - 0.216 MGD
Max- - 0.360 MGD

Receiving Stream - Connecticut River

7 day 10 year low flow (7Q10) - 1085 MGD

[1]PARMETER	[2]EPA Suggested Instream Criteria Chronic ug/l	Acute ug/l	[3]Max. Discharge Level which Meets Criteria Ave. mg/l	Max. mg/l	[4]National technology Guidelines Ave. mg/l	Max. mg/l	[5]Present Discharge Permit Ave. mg/l	Max. mg/l	[6]Most Stringent of Columns 3, 4, or 5 Ave. mg/l	Max. mg/l
Flow (MGD)							0.216	0.360		
Copper (T)	6.5	9.2	20	28	1.0	1.0	1.0	1.0	1.0	1.0
Zinc(T)	59	65	177	196	1.0	2.0	1.0	2.0	1.0	2.0
Nickel(T)	88	1442	265	4346	-	-	1.0	2.0	1.0	2.0
Iron(T)	1000		3014		1.0	1.0	1.0	1.0	1.0	1.0
TSS					30	100	30	100	30	100
Oil & Grease	-							15	15	15

Footnote:

1. Pollutants under consideration for regulation in permit.
2. From Water Quality -1986, Gold Book criteria documents and based on a hardness of 50 mg/l.
3. Average values calculated from chronic criteria, with extreme low stream flow (7Q10), and maximum discharge flow. Maximum levels calculated from acute criteria, extreme low streamf low (7Q10), and maximum discharge.
4. From 47 FR 52304, November 19, 1982, as amended at 48 FR 31404, July 8, 1983.
5. From present permit issued on August 17, 1987 page 3 of 11.
6. Limitations imposed on the proposed draft permit.

(T)- Total metals

ATTACHMENT D1

Outfall 001

Discharge Flow - 133.2 MGD
Receiving Stream - Connecticut River (at Montague City, MA)

7 day 10 year low flow (7Q10) - 1085 MGD

[1]PARAMETER	[2]EPA Suggested Instream Criteria		[3]Max. Discharge Level which Meets Criteria		[4]National Technology Guidelines		[5]Present Discharge Permit		[6]Most Stringent of Columns 3, 4 and 5	
	Chronic	Acute	Ave.	Max.	Ave.	Max.	Ave.	Max.	Ave.	Max.
Flow (MGD)							133.2	133.2		
Chlorine (TR)	11 ug/l	19 ug/l	0.17	0.17	0.2	0.2	0.15**	0.15**	0.15**	0.15**
Tmax °C(°F)	-	28.3(83)	-	36(96.8)*	-	-	-	39(102)	-	[7]39(102)
delta T °C(°F)	(warm months) (cold months)		-	-	-	-	-	11.1(20) 18(32)	-	11.1(20) 18(32)

1 - Pollutants under consideration for regulation in permit.
2 - From Ambient Water Quality Criteria for Chlorine-1986, Gold Book.
3 - Average values and maximum levels calculated from chronic criteria, with extreme low streamflow (7Q10), and maximum discharge would normally be used. But however since the chlorination occurs only two hours per day, the acute criteria is used in the calculation of limit.
4 - From 47 FR 52304, November 19, 1982, as amended at 48 FR 31404, July 8, 1983.
5 - On October 29, 1984, the DEQE authorized the facility to discharge at 0.15 mg/l. But for the present permit the limit of 0.15 mg/l for chlorine residual has been adopted.
6 - Limitations based on the propose draft permit.
7 - From §316a study.

TR - total residual chlorine

* - As proposed on the permit application.
** - Limited as total residual oxidants in the proposed draft permit.